**Amendment to the Drawings:**

The attached sheets are formal drawings that are being submitted as replacement sheets for the original sheets filed with the application.

Attachment: Six (6) Replacement Sheets of formal drawings

## REMARKS

Claims 5-11, 16-19 and 25-29 have been canceled without prejudice or disclaimer. Claims 1, 15 and 20 have been amended. These amendments and additions add no new matter as the claim language is fully supported by the specification and original claims.

### I. Rejections under 35 U.S.C. §112

Claims 20-24 and 30-32 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection.

Regarding claim 20, the Office Action alleges that the "preamble makes reference to a method of identifying molecules; however, the body of the claim does not provide a connection between scanning the nanocodes and identifying the molecules. Scanning the molecules does not necessarily lead to identification. Alternately, scanning can be used to generate characteristics or properties of the molecules."

Applicants have amended the preamble of claim 20 as suggested by the Office Action to clarify that the scanning can be used for identifying characteristics or properties of molecules. Accordingly, Applicants request that the rejection of claim 20, with dependent claims 21-24 and 30-32 under 35 U.S.C. §112 be withdrawn.

### II. Rejections under 35 U.S.C. §102

Claims 1-3, 12-15 are rejected under 35 U.S.C. §102(a) as allegedly being anticipated by US 2003/0033863 (Ashby et al.). Applicants respectfully traverse this rejection.

A rejection of claims under 35 U.S.C. §102 is improper unless each and every element of the claimed subject matter is found, either expressly or inherently described, in a single prior art

reference (Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987); MPEP § 2131).

The Office Action first alleges that "Ashby et al. discloses an atomic force microscope for use in screening potential interactions between biological molecules comprised of an array of scanning tips, as shown in Figure 8". Applicants respectfully disagree, there is no scanning array simultaneously scanning a surface in Ashby et al. Ashby et al. discloses a plurality of AFM heads 50 scanning a plurality of sample areas 72, with the plurality of sample areas 72 on the surface having spacing equal to the spacing between the AFM heads 50 (Ashby et al., paragraph [0042], Figures 7 and 8). As can be seen in the specification and figures of Ashby et al., each of the AFM heads 50 has its own associated sample area 72. There is no teaching in Ashby et al. of using more than one AFM head 50 (i.e., scanning array) to analyze an individual sample area 72.

The Office Action further alleges that Ashby et al. includes "an analyzer coupled to the scanning array". Applicants again respectfully disagree, there is no analyzer in Ashby et al. A closer review of Ashby et al. discloses that the device includes "a signal processor that drives the solenoid" (Ashby et claim 11) and a "signal measured at the position sensitive photodetector may be processed or recorded by a signal processor 34" (Ashby et al. paragraph [0036]). The "signal processor 34 may amplify and phase shift the signal from the position sensitive photodiode 32, and use the resulting signal to drive the solenoid 24" (Ashby et al. paragraph [0049]). While Ashby et al. discloses "a plurality of binding interactions may be measured simultaneously", nowhere in Ashby et al. is it disclosed that the signal processor receives the simultaneously scanned information, or that the signal processor is capable of identifying molecules with the scanned information.

In contrast, the present invention discloses a "surface analysis device for identifying characteristics or properties of molecules by simultaneously scanning nanocodes on a surface of

a substrate". Claim 1 further requires that this simultaneous scanning is accomplished by using "a scanning array capable of simultaneously scanning the nanocodes on the surface of the substrate; and an analyzer coupled with the scanning array capable of receiving simultaneously scanned information from the scanning array and identifying molecules associated with the nanocodes" (see also paragraph [0031] in the application). Independent claim 15 also has similar limitations.

Therefore, Ashby et al. fails to teach and every element of the claimed subject matter. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(a) is respectfully requested for claim 1, with dependent claims 2-3, 12-14, and claim 15.

## III. Rejections under 35 U.S.C. § 103

Claims 4 and 24 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over US 2003/0033863 (Ashby et al.) in view of US 5,047,633 (Finlan et al.). Applicants respectfully traverse this rejection.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify a reference or to combine the teachings of multiple references. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all of the recited claim limitations. Of course, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure.

The Office Action alleges that "Ashby et al. fails to disclose that the scanning array is a three by three array" but that Finlan et al. shows four by four array in Figure 4 and the it "is the examiner's position that one of ordinary skill in the art would have the requisite ability to create a scanning array as large or small as the operator wishes".

Applicants disagree with the Office Actions assertion that Finlan et al. teaches a scanning array as disclosed in the present application. A closer look at Finlan et al. reveals that its teachings are similar Ashby et al. in that it uses a plurality of heads to scan a plurality of sample areas. Finlan et al. discloses the surface can be divided "into a plurality of cells, and utilising *a single probe* to monitor each cell" and that the "surface 10 to be scanned (shown dotted in FIG. 4) is divided into a large number of cells 12 each of which is scanned by *a respective probe* 13" (Finlan et al., col. 5, line 67 to col. 6, lines 5) (emphasis added). There is no teaching in Finlan et al. of using more than one probe (i.e., scanning array) to analyze an individual sample area.

In contrast, the present invention discloses a "surface analysis device for identifying characteristics or properties of molecules by simultaneously scanning nanocodes on a surface of a substrate". Claim 1 requires that this simultaneous scanning is accomplished by using "a scanning array capable of simultaneously scanning the nanocodes on the surface of the substrate; and an analyzer coupled with the scanning array capable of receiving simultaneously scanned information from the scanning array and identifying molecules associated with the nanocodes" Claim 4 further requires that the scanning array is a 3x3 array of AFM tips.

Applicants have shown above with respect to 35 U.S.C. §102(a) that Ashby et al. fails to teach each and every element of claim 1. Applicants have also shown that Finlan et al. does not teach a 3x3 array of AFM tips, as required in claim 4. The combination of Ashby et al. and Finlan et al. fails to teach or suggest all of the recited claim limitations of claim 4. In addition, there is no motivation to modify or combine the references because their teachings appear to be similar. Accordingly, for at least the reasons stated above, reconsideration and withdrawal of the rejection of claim 4 under 35 U.S.C. §103(a) is respectfully requested.

In regard to claim 24, Applicants believe this may have been rejected in error as a carry over from the previous Office Action in which claims 4 and 24 were rejected together. The

present office action indicates that claims 20-24 include allowable subject matter and Applicants have amended claim 20, making it allowable. Claim 24 depends on claim 20 and should be allowable for at least those same reasons. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

## IV. Allowable Subject Matter

**A.** Claims 20-24 and 30-32 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph.

Applicants have amended claim 20 as suggested in the Office Action. Accordingly, amended claim 20, along with dependent claims 21-24 and 30-32 should now be allowable.

**B.** Generic claim 33 is allowable and dependent claims 34-37 are also deemed allowable. Applicants wish to thank the Examiner of the allowance of the generic claim 33 and withdrawal of the restriction requirement with regards to claims 34-37.

## V. Conclusion

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

Check number 581181 in the amount of $180.00 is enclosed for the Information Disclosure Statement late fee under § 1.17(p). No other fee is deemed necessary in connection with this submission. However, the Commissioner is hereby authorized to charge any fees required by this submission, or credit any overpayments, to Deposit Account No. 07-1896 referencing the above-identified docket number. A duplicate copy the Transmittal Sheet is enclosed.

Respectfully submitted,

Date: March 15, 2006

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Attachment: Six (6) Replacement Sheets of formal drawings